

Risk Factors¹

- Factors associated with increased risk of ovarian cancer include age, overweight/obesity, family history of breast or ovarian cancers, and certain genetic mutations (e.g. BRCA1 and BRCA2 gene mutations).
- Factors associated with decreased risk of ovarian cancer include pregnancy, long-term oral contraceptive use, tubal ligation, and hysterectomy.

Warning Signs and Symptoms¹

- There are often no symptoms of early stage disease.
- When symptoms occur, they can include abdominal distension, bloating, and increased need to urinate.

Early Detection¹

- There is no proven screening test for ovarian cancer.
- For high-risk women, a screening approach may be recommended that includes pelvic exam, transvaginal ultrasound, and measuring CA125 level in the blood.

Ovarian Cancer Facts

- Ovarian cancer is the ninth most commonly diagnosed cancer (excluding nonmelanoma skin cancer) and the fifth leading cause of cancer death among women in the United States.¹
- Over the 2005-2009 time period, the incidence rate of ovarian cancer among women in Virginia was 11.9 cases per 100,000.² (U.S. rate=12.7 cases per 100,000)³
- Figure 1 shows incidence rates of ovarian cancer by

Cancer Incidence Rate by Health District, Ovarian, Virginia, 2005-2009

Age-Adjusted Rate (per 190,000)

9.1 - 10.3

10.4 - 10.8

10.9 - 12.5

12.6 - 13.2

13.3 - 17.4

Source: Virginia Cancer Registry, Virginia Department of Health.
Rates are age-arith/99ed to the 2000 U.S. standard population.

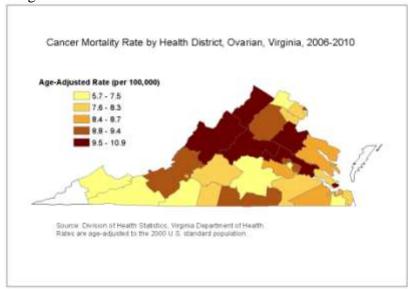
health district in Virginia. Roanoke, Three Rivers, and Lord Fairfax had the highest incidence rates of ovarian cancer among the 35 health districts.²

Figure 1

Ovarian Cancer in Virginia

- Over the 2006-2010 time period, the mortality rate from ovarian cancer among women in Virginia was 8.3 deaths per 100,000.⁴ (U.S. rate=8.0 deaths per 100,000)⁵
- Figure 2 shows ovarian cancer mortality rates by health district in Virginia. Hampton, Thomas Jefferson, and Central Shenandoah had the highest ovarian cancer mortality rates among the 35 health districts.⁴

Figure 2



- In Virginia, incidence rates were higher in white women (12.4 cases per 100,000) compared to African-American women (8.8 cases per 100,000). ² Ovarian cancer mortality rates were also higher among white women (8.7 deaths per 100,000) compared to African-American women (7.0 deaths per 100,000). ⁴
- Ovarian cancer has a five-year relative survival rate of 93 percent if diagnosed in its earliest (local) stage when it is most curable. In Virginia, only 14 percent of ovarian cancer diagnosed was local stage. ²
- The percentage of ovarian cancer cases diagnosed local stage was similar for both white (14%) and African-American (13%) women in Virginia.²
- In Virginia in 2010, there were 564 inpatient hospitalizations for ovarian cancer, at a total cost of over \$25 million. The average length of stay was 6.3 days and the average charge per stay was \$45,376.6

⁶ VDH Virginia Health Information Hospital Discharge Patient-Level Dataset.



¹American Cancer Society Cancer Facts & Figures 2009 (http://www.cancer.org)

² Virginia Cancer Registry. Based on combined data from 2005-2009. Rates are age-adjusted to the 2000 U.S. standard population.

³Howlader N, Noone AM, Krapcho M, Neyman N, Aminou R, Waldron W, Altekruse SF, Kosary CL, Ruhl J, Tatalovich Z, Cho H, Mariotto A, Eisner MP, Lewis DR, Chen HS, Feuer EJ, Cronin KA (eds). SEER Cancer Statistics Review, 1975-2009 (Vintage 2009 Populations), National Cancer Institute. Bethesda, MD, http://seer.cancer.gov/csr/1975_2009_pops09/, based on November 2011 SEER data submission, posted to the SEER web site, April 2012. Based on combined data from 2005-2009. Rates are age-adjusted to the 2000 U.S. standard population.

⁴VDH Division of Health Statistics. Based on combined data from 2006-2010. Rates are age-adjusted to the 2000 U.S. standard population.

⁵ Miniño AM, Murphy SL, Xu JQ, Kochanek KD. Deaths: Final data for 2008. National vital statistics reports; vol 59 no 10. Hyattsville, MD: National Center for Health Statistics. 2011. Available from: http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59 10.pdf. National rate is the 2008 age-adjusted rate, which is comparable to the state five-year interval midpoint.

Ovarian Cancer in Virginia

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